

Complete Listing of Claims Pursuant to 37 C.F.R. §1.121

Pursuant to 37 C.F.R. §1.121 the following is a complete listing of the claims of the present application. In this set of claims, please amend the claims as follows. The following listing of claims will replace all prior versions of claims in the application:

1.-61. (canceled)

62. (currently amended) A G-CSF analog having hematopoietic activity comprising an internal core of helices A, B, C and D and external loops as set forth in FIG. 4 and an amino acid sequence, wherein the amino acid sequence differs from that of SEQ ID NO:2 in that

a) lysine residues at positions 17,~~35~~ and 41 are substituted ~~with arginine~~;

b) at least one amino acid sequence in an external loop is altered to include one or more ~~lysines~~ lysine amino acid residues containing at least one PEG, wherein one or more of said lysine amino acid residues is covalently modified with polyethylene glycol (PEG); and

wherein, an N-terminal methionine as set forth in SEQ ID NO:2 is optional.

63.-65. (canceled)

66. (currently amended) A G-CSF analog having hematopoietic activity comprising an internal core of helices A, B, C and D and external loops as set forth in FIG. 4 and an amino acid sequence, wherein the amino acid sequence differs from that of SEQ ID NO:2 in that

a) lysine residues at positions 17,~~35~~ and 41 are substituted ~~with arginine~~;

b) at least one amino acid sequence in an external loop is altered to include one or more ~~lysines~~ lysine amino acid residues containing at least one PEG; and, wherein one or more of said lysine amino acid residues is covalently modified with polyethylene glycol (PEG);

c) at least one of one internal core α -helix is altered helix A amino acid sequence, other than at said lysine residue at position 17, helix C amino acid sequence and helix D amino acid sequence is altered to include ~~one or more lysine residues containing at least one PEG, wherein the altered amino acid sequence is not essential~~ substitution of one or more amino acid residues which are not essential for structural integrity, and

wherein, an N-terminal methionine as set forth in SEQ ID NO:2 is optional.

67.-74. (canceled)

75. (currently amended) A G-CSF analog having hematopoietic activity comprising an internal core of helices A, B, C and D and external loops as set forth in FIG. 4 and an amino acid sequence, wherein the amino acid sequence differs from that of SEQ ID NO:2 in that

a) lysine residues at positions 17, ~~35~~ and 41 are substituted with arginine; and

b) at least one of one internal core α -helix is altered helix A amino acid sequence, other than at said lysine residue at position 17, helix C amino acid sequence and helix D amino acid sequence is altered to include ~~one or more lysine residues containing at least one PEG, wherein the altered amino acid sequence is not essential~~ substitution of one or more amino acid residues which are not essential for structural integrity, and

wherein, an N-terminal methionine as set forth in SEQ ID NO:2 is optional.

76. (currently amended) A G-CSF analog having hematopoietic activity comprising an internal core of helices A, B, C and D and external loops as set forth in FIG. 4 and an amino acid sequence, wherein the amino acid sequence differs from that of SEQ ID NO:2 in that

a) lysine residues at positions 17, ~~35~~ and 41 are substituted with arginine; and

b) at least two ~~internal core α -helix amino acid sequence is altered~~ of helix A amino acid sequence, other than at said lysine residue at position 17, helix C amino acid sequence and helix D amino acid sequence are altered to include ~~one or more lysine residues~~

~~containing at least one PEG, wherein the altered amino acid sequence is not essential~~
substitution of one or more amino acid residues which are not essential for structural
integrity, and

wherein, an N-terminal methionine as set forth in SEQ ID NO:2 is optional.

77. (canceled)

78. (canceled)

79. (currently amended) A G-CSF analog having hematopoietic activity comprising an internal core of helices A, B, C and D and external loops as set forth in FIG. 4 and an amino acid sequence, wherein the amino acid sequence differs from that of SEQ ID NO:2 in that

a) lysine residues at positions 17, ~~35~~ and 41 are substituted ~~with arginine~~; and

b) ~~at least three internal core α helix amino acid sequence is altered~~ of helix A amino acid sequence, other than at said lysine residue at position 17, helix C amino acid sequence and helix D amino acid sequence are altered to include ~~one or more lysine residues~~
~~containing at least one PEG, wherein the altered amino acid sequence is not essential~~
substitution of one or more amino acid residues which are not essential for structural
integrity, and

wherein, an N-terminal methionine as set forth in SEQ ID NO:2 is optional.

80. (canceled)

81. (currently amended) The G-CSF analog of any one of claims ~~62-80~~
62, 66, 75-76, and 79, wherein the hematopoietic activity of said G-CSF analog *in vitro* is lower than the hematopoietic activity of unaltered recombinant human G-CSF *in vitro*.

82. (previously presented) The G-CSF analog of claim 81, wherein the serum half-life of the G-CSF analog is greater than the serum half-life of unaltered recombinant human G-CSF.

83. (previously presented) The analog of claim 81, wherein hematopoietic activity is determined by an *in vitro* tritiated thymidine assay.